SR12

JANUARY 2012 | FINAL

CALTRANS DISTRICT 10

State Route 12

TRANSPORTATION CONCEPT REPORT

Prepared by:

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INTRODUCTION TO THE TRANSPORTATION CONCEPT REPORT

What is a Transportation Concept Report?

A Transportation Concept Report (TCR) is a long-term planning document that each Caltrans District prepares for every State highway, or portion thereof, in its jurisdiction, and is where long-range corridor planning in Caltrans usually begins. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted level of service (LOS) and quality of operations that are feasible to attain over a twenty-year period as indicated in the route concept.

The Concept Facility will provide the amount of vehicle-carrying capacity necessary to achieve the Concept LOS and, in some cases, people-carrying capacity will also be incorporated. Auxiliary lanes are not considered a part of the mainline roadway and, therefore, are not included in the number of travel lanes indicated in a Concept.

In addition to the 20-year Route Concept, the TCR includes an Ultimate Concept, which is the ultimate goal for the route beyond the twenty-year planning horizon. Ultimate Concepts must be used cautiously however, because unforeseen changes in land use and other variables make forecasting beyond twenty years difficult.

How does the TCR fit in with local and regional planning efforts?

As owner/operator of the State highway system, Caltrans has a duty to establish a long-range vision for its highways and determine overall strategies for their management. This is achieved by taking into consideration the numerous factors encompassed in the human and natural environments in which a particular route exists. During development of a TCR, Caltrans' objective is to have local, regional, private sector, and State consensus on corridor Concepts, planning strategies, and improvement priorities.

Whenever a General Plan is updated, State highways within the jurisdiction should be recognized and included in the circulation system. The jurisdiction should also adopt the Concept LOS standard (the minimum level or quality of operations that is appropriate for each route segment and is considered to be reasonably attainable within the 20-year planning period) indicated in the TCR, along with the Concept Improvements described in the TCR as necessary to meet the Concept LOS. The jurisdiction has the option of adopting a higher LOS standard and acknowledging the inconsistency with the TCR and the associated funding participation limitations by the State for State highway improvements. Typical Concept LOS standards in District 10 are LOS C in rural areas and LOS D in urban areas.

Does the TCR have to be read from cover to cover in order to get pertinent information about a route segment?

Caltrans does not intend for TCRs to be read from cover to cover as one would read a book. Rather, the TCR is a reference document with segment-specific information presented in a concise and readable format that allows the user to easily access, in one place in the document, all the necessary data and information that pertains to a particular segment of the route.

This format creates a certain amount of repetition in the TCR, as the route is divided into segments for analysis. Each segment's Fact Sheet contains a variety of technical, statistical, cultural, environmental and other useful information that provide a deeper understanding of the route and a context for the Concepts developed for it.

Transportation Concept Reports also include estimated right-of-way widths, and a scan of environmental resources and issues known to exist in the vicinity of the highway, Right-of-way and environmental information provided in a TCR are relative to the route or route segment and are not to be considered project specific. Precise right-of-way needs and environmental resources cannot be defined until the appropriate environmental and engineering studies are completed.

In the back of the TCR is a glossary of terms and acronyms, and a list of references used to prepare the report.

Concept Improvements

The range of improvements available to achieve a Route Concept is heavily influenced by environmental, political, and fiscal conditions. In many areas, planned projects are subject to meeting air quality conformity standards. Unanticipated safety projects and routine roadway maintenance are not included in Route Concept Improvements, although both will occur throughout the corridor as needed.

Because a highway is but one part of an interconnected transportation network, District 10 takes a corridor approach to developing TCRs. The corridor may include additional transportation systems, such as bus or rail transit service, bicycle and pedestrian facilities, heavy rail, a seaport, airports, interregional bus service, local roadways, and facilities for neighborhood electric vehicles used frequently by older citizens for local mobility. All of these systems reduce excess highway demand by providing travelers and shippers of goods with non-highway or non-driving options. Expansion of those that can provide a notable improvement to mobility within the corridor are included as Concept improvements.

Where a Concept LOS is F, the TCR recommends general operational improvements and alternate modes of travel as starting places for further study. However, because the number of route segments with a Concept LOS F is expected to increase, operational (that is, non-capacity-increasing) improvements are now the primary strategy for optimizing the operation of the existing highway infrastructure. To fully integrate this strategy, future TCRs will include an operational analysis of heavily-congested urban route segments. The results of this analysis will determine which specific operational improvements will become Concept Improvements.

District 10 is continually striving to improve the quality and usefulness of its TCRs. Future updates will be expanded to include performance measures and, if available, approved plans that help incorporate specific, context-sensitive features into highway projects.

EXECUTIVE SUMMARY

The Transportation Concept Report (TCR) provides long range system planning for highways, and identifies the potential future need for capacity increasing improvements. Employing Highway Capacity Manual (HCM 2000) methodologies, the TCR projects current traffic volumes twenty years into the future and compares future outcomes with the current facility and concept level of service (LOS), recommends future concept facilities, and defines the Ultimate Transportation Corridor (UTC) needed for the preservation of future right of way beyond its twenty year planning horizon.

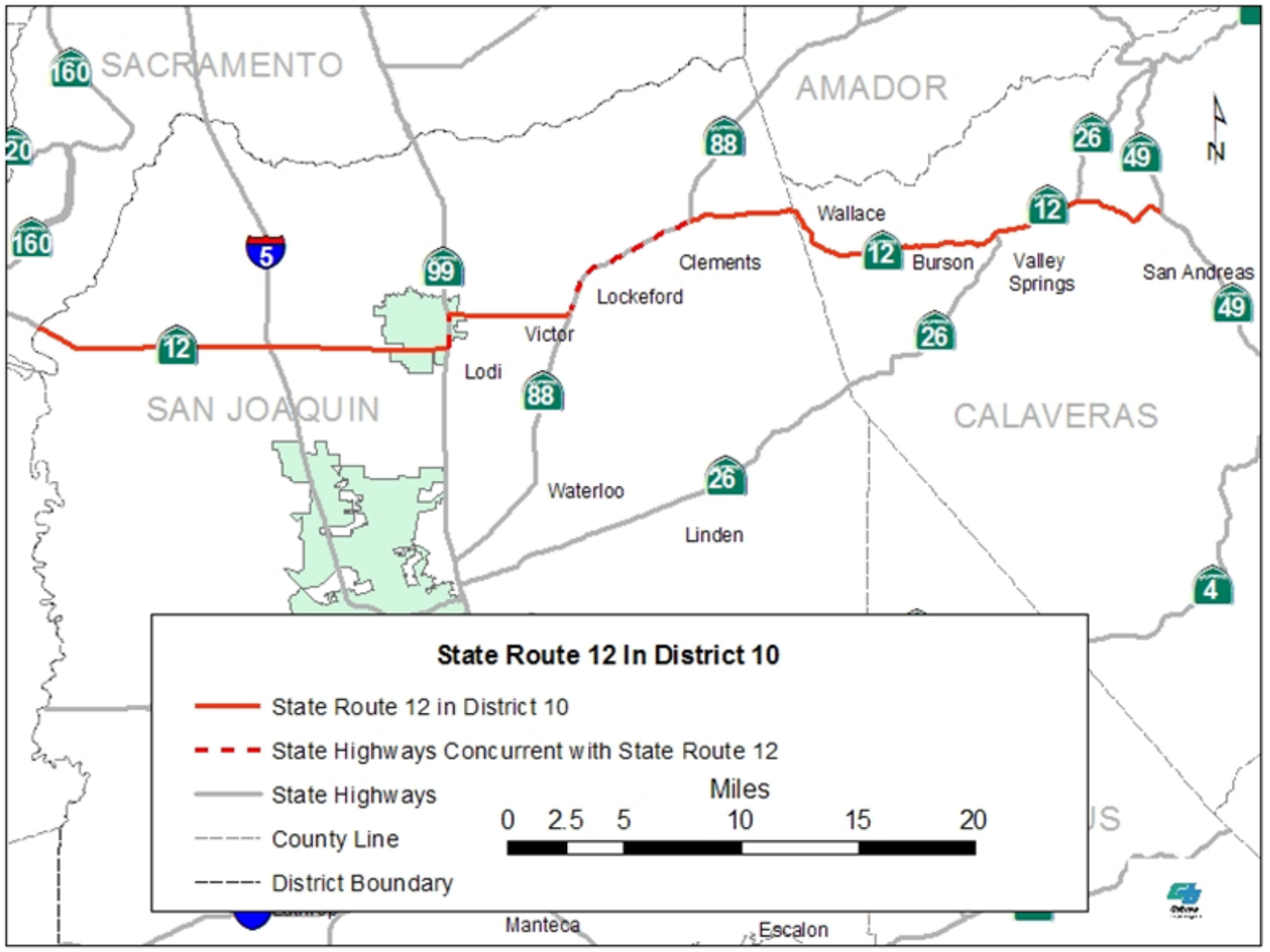
Within District 10, SR-12 is on the Interregional Road System (IRRS), but is not a High Emphasis or Focus Route, and the concept LOS standard for facilities with this designation is 'C' for rural and 'D' for urban. Identified as a component of the Freeway and Expressway System, SR-12's minimal concept facility is expressway, with a conventional highway facility within the city limits of Lodi.

The Federal Highways Administration (FHWA) has functionally classified SR-12 as a Principal Arterial that is on the Federal Highway System (FHS) but is not a component of the Strategic Highway Network (STRAHNET) from PM SJ 0.0 to PM SJ L23.3. From PM SJ L23.3 to PM Cal 18.2 (SR-49), SR-12 is classified as minor arterial that is not on the FHS. SR-12 is a terminal access route consistent with the Surface Transportation Assistance Act's provisions throughout its entire length. SR-12 is bicycle and pedestrian accessible, but is not designated or considered eligible for state or federal scenic highway status.

Current or future LOS for all highway segments on SR12 will exceed their respective concept LOS by 2030. The concept facilities required to address these deficiencies would employ a four lane expressway except for segments SJ-3 and SJ-4 within the city limits of Lodi which require a six or four lane (respectively) conventional highway on the current alignment, or a six or four lane (respectively) expressway on a new alignment as the concept facilities. Current programmed or planned projects include capacity increasing projects on all segments of SR-12 necessary to achieve the concept LOS by 2030, except for Segments SJ-6, and Cal-1. The anticipated UTC remains similar to the concept facility at this time.

Initial planning documents do not consider costs, design, or prioritization, and are subject to refinement and revision as better information or methods become available. The information provided reflects best practices and do not necessarily constitute standards, specifications, or regulations. Every effort has been made by the District 10 Planning Division to ensure the accuracy and precision of the data presented. If you find information you consider inaccurate or data you consider unreliable, please contact Lynn O'Connor at (209) 948-3975 or at Lynn_OConnor@dot.ca.gov .

Figure 1: Route Location Map



SAN JOAQUIN COUNTY SUMMARY

Six segments of SR-12 were analyzed in San Joaquin County. The division of these segments followed considerations of changes in traffic volume or its composition, a change in the number of lanes, whether the segment was urban or rural, and changes in transportation planning or land use planning agency. This method deviates from that suggested in HCM (2000) p 21-13, but provides for a more concise characterization for the need for capacity increases, verses operation improvements outside this document's scope.

Application of Highway Capacity Software (HCS version 5.3) consistent with HCM (2000) employed the two lane and multilane options. These models appropriately address conditions on all the segments of SR-12 save the urban streets characteristic of PM 15.18/18.07 and PM 18.07/18.36 within Lodi. The more appropriate options for these segments is the 'Arterials' option, but require a data acquisition effort beyond that currently available to system planning. As the LOS obtained by the two lane and multilane options appears consistent with observed traffic conditions on the two urban street segments, indicates a reduction of level of service with increasing future traffic volumes where capacity improvements may be needed at the threshold for segments on the IRRS, and which produces outcomes consistent with local planning, the employment of these methods provides sufficient accuracy, though not the necessary precision for an operational evaluation.

Consistency between District 10 and Districts 3 and 4 planning for SR-12 was assessed. With the exception of the segment serving Rio Vista, the concept facility of a four lane expressway for rural segments was found consistent within District 4's SR-12 Corridor System Management Plan (CSMP), and in the ongoing SR-12 Corridor Study.

Within San Joaquin County, SR-12 travels concurrently over two highways, SR-99 and SR-88. The assessment of the LOS for these two routes may not be consistent with other TCRs or CSMPs for this time period. This is particularly true for the segment for SR-88. For the purposes of this planning effort, the segment was treated in its entirety, while planning efforts specific to the route would appear to require additional segmentation of the nine mile segment to address changes in speed limits and traffic volumes. Additionally, it is outside the purpose of this document to address future planning needs for these segments other than to assess if current or future conditions exceeds Concept LOS, as was found for both.

SR-12 serves three communities in San Joaquin County—Lodi, Victor, Lockeford/Clements. Of the three, only Lodi is incorporated; and the Lockeford/Clements community is directly served by SR-88 that further discussion will be taken up in that TCR. Primarily agricultural (nut crops and wines), the communities were historically linked by a spur line of the Southern Pacific Railroad (originally the San Joaquin Sierra Nevada Railroad) roughly following the same route as SR-12. Although a large portion of the local population is employed in agriculture, all three can be characterized as bedroom commuter communities with employment located elsewhere. According to the 2010 census, more than a third of inhabitants of Lodi and Victor were identified as Latino (36.4%,51.2% compared to 32.4% for California), with Native American /Alaskans comprising a slightly larger percentage of the population (6.9%, 2.4% compared to 1% for California). Median household income is below the state average ($39,370 for Lodi compared to $46,816 for California 2000 Census).

General Plans characterize and distribute future population density, and thus influence future traffic volumes. The San Joaquin County General Plan (2010) designates much of the adjoining properties along SR-12 to rural residential, low density residential, and general agriculture designations, with some industrial designation in the vicinity of Victor, and along the outskirts of Lodi (applicable to Segments 1, 2, 5, and 6). Within the twenty year planning horizon of this document, any traffic increase on SR-12 will likely reflect growth outside the immediate corridor. Within Lodi (General Plan 2010) the principal land use is residential (60%) with the distribution of commercial and industrial land uses along SR-12 (Segments 3 and 4). As is currently the case, and likely to continue into the near future, commercial development along Segment 3 will attract high traffic volumes as it serves as a destination for work and shopping, as well as a locus for pass through trips from the local community to other destinations. The continued location of industrial land uses in proximity to Victor Road may increase the proportion of local truck traffic volumes on Segments 4 and 5.

Multimodal opportunities are at their greatest within the city limits of Lodi. A Class II bicycle lane runs from Westgate Road to School Street (in Segment 3), that connects to several existing bicycle routes in the city. Local transit service is available along SR-12 (Grapevine Transit Routes 2 and 5) and connects to the intermodal facility located near the intersection of North Sacramento Road and Lodi Avenue. Interregional transit opportunities have diminished with the cessation of Calaveras Transit's Lodi route, though opportunities remain with San Joaquin Transit's service to the Bay Area, and the route connection provided by South County Transit's Delta Route (Galt-Lodi-Isleton). The intermodal facility provides Commuter train service via Amtrak. SR-12, along with other city streets possess sidewalks and provide the typical urban pedestrian amenities.

Multimodal commuting opportunities outside of Lodi are slight. Currently, San Joaquin Transit does not provide service to communities east of Lodi on SR-12. SR-12, designated a Class III bicycle route, possesses sufficiently wide shoulders and standard lane widths that may allow safe bicycle travel. Sidewalks are present in Lockeford (fronting SR-12 but not local side streets), but are missing in both Victor and Clements. The Coast to Crest Trail's proposed route will likely follow or cross SR-12 in San Joaquin County.

SR-12, as a principal arterial in San Joaquin County, has a significant role in the interregional movement of goods and services in California. SR-12 functions as a shorter and more efficient haul route for freight shipments from the North Bay (particularly industries and services along the I-80 corridor) to Southern and Central California than via the Bay Area. In particular, SR-12 provides a vital link between the agricultural counties of the northern San Joaquin Valley with the counties north of the San Francisco Bay. SR-12 provides a direct freight and transportation connection between wineries in San Joaquin County and the Mother Lode with industries supporting the wineries in Napa and Sonoma Counties, with Fairfield being the point of origin for the manufacture of wine bottles distributed throughout the region. Similar interconnections exist with alfalfa and other feeds grown in the Delta and shipped to dairies in Sonoma County. Lodi provides the only break bulk point on SR-12 for trucks and trains, however the freight facility appears to serve local industrial needs, with regional needs addressed at either the facility at Lathrop off of I-5 at Roth Road, or the area east of Stockton off of SR-99 on Mariposa Road.

The segments of SR-12 west of Lodi present unique system planning issues (Segments 1 and 2):

> The route has been subject to a California Highway Patrol Safety Corridor Safety Project since 1995. The designation reflects ongoing concerns with driver safety due to an accident rate exceeding the State average for both

injuries and fatalities on similar highway segments, which prompted passage of Assembly Concurrent Resolution 45 mandating a study of SR-12 in Solano County and to provide recommendations on both short and long range improvements (June 17, 1994). Since that time, corridor studies have had to consider both safety and operational improvements. For the most recent three year period the segment between Interstate 5 and the Sacramento County line has reported an accident rate below the State average for similar facilities; and the segment between I-5 and Lower Sacramento Road which has seen three intersection signal projects since 1995 (Thornton Road, Davis Road, DeVries Road) and several intersection widening projects to allow for left turning movements reports an above average accident rate compared to the State average for similar facilities—though there appears to be a reduction in the rate of accident severity.

SR-12 in the Sacramento-San Joaquin River Delta crosses two drawbridges (Little Potato Slough, Mokelumne River). The drawbridges, especially the Mokelumne River Bridge present operational considerations with speed reduction on approach due to reduced lane width, along with intermittent congestion and driver delay associated with bridge openings or when the bridges need to undergo unscheduled maintenance or repair. Non standard shoulders and lane widths combined with a lack of parallel streets and roads for detour contribute to severe congestion events.

The high content of peat in Delta soils results in presenting engineering challenges with pavement maintenance and lifespan. Oxidation and compaction of peat results in shorter pavement life with frequent upkeep.

Future planning efforts should anticipate concerns with inundation due to sea level rise, land subsidence, and changes in precipitation and flood regimes due to global warming. Mapping shows the segment to be currently below sea level from Guard Road west, with a currently projected rise in sea level by 2100 to be between 31 and 69 inches, with an estimate of 5 to 8 inches by 2030 (State of California Sea Level Rise Interim Guidance Document, October, 2010)[1]. Subsidence rates in the Delta are anticipated to slow except in locations with ten feet or greater of peat, a condition which applies to the portion of this segment on Bouldin Island[2]. Recent studies suggest that global warming has increased flood risk[3].

Aside from bridge upkeep and maintenance projects, there are only two programmed operational improvement projects on SR-12 in San Joaquin, on Segment 1—the Bouldin Island Rehab and the Glasscock Road Operational Improvements and Smart Corridor. Currently scheduled to begin construction in late 2012/ early 2013, The Bouldin Island Rehab's (Mokelumne River Bridge to Little Potato Slough Bridge) primary purpose is pavement rehabilitation, but includes redesign of the section from a two lane conventional highway to a two lane divided highway with a concrete median barrier. The Glasscock Road Operational Improvements and Smart Corridor's (Little Potato Slough Bridge to Thornton Road) primary purpose is to reduce points of conflict at intersections, as well as installing an Intelligent Traffic System (ITS). The Smart Corridor will include Changeable Message Signs (CMS), a Highway Advisory Radio station (HAR), Extinguishable Message Signs (EMS), Closed Circuit Television (CCTV) cameras, and Traffic Monitoring Stations (TMS) on SR-12 between I-80 and I-5.

Although the programmed Smart Corridor on SR-12 addresses interregional traffic needs, for purposes of congestion management on the rest of SR-12, the current network of traffic monitoring stations would be inadequate for public notification, so most of the future upgrades include changeable message signs, primarily for incident warning on I-5 and SR-99, though two CMS are proposed in Calaveras County east of the western junction of SR-12 and SR-26.

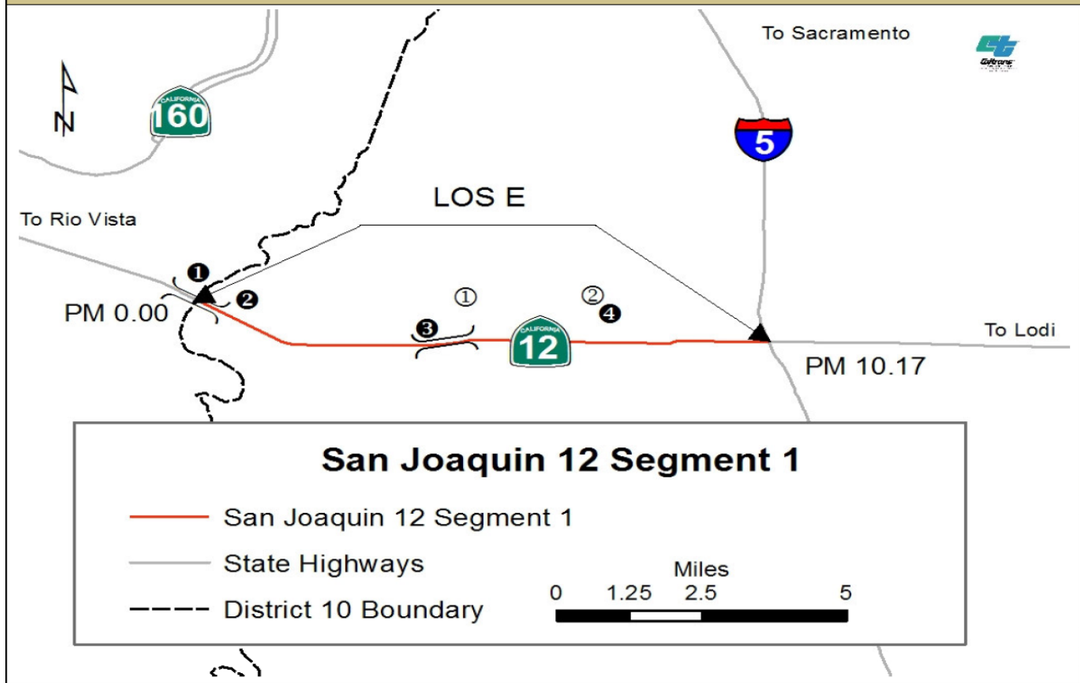
As all segments of SJ-12 will be deficient by 2030, review of the San Joaquin Council of Government's 2011 Regional Transportation Plan indicated that programmed or planned capacity increasing projects would address the deficiency along segments of SJ-12 concurrent with FHS designation. Segment 6 (from SR -88E to Calaveras County) was determined to currently operate at a LOS of 'D', and will likely continue to do so to 2030. Modeling of a four lane expressway employing the 2030 projected traffic volume of 12,820 Average Annual Daily Traffic (AADT) was found to elevate the LOS to 'A' (HCS+ Multilane Option version 5.3), and suggests that under closer analysis there remains potential that the facility could retain its existing lane configuration with operational improvements. As the facility's current accident rate is well below the State average for similar facilities (0.43 incidents/1,000,000 vehicle miles versus 0.80 incidents/1,000,000 vehicle miles) there would be little incentive for further modification, and is likely reflected in the absence of projects in the current District 10 Status of Projects or in local transportation planning. However, it is likely with future increases in traffic volumes that the facility's accident rate might rise to either match or exceed the State rate, and should be monitored.

Within all highway segments discussed, consideration of operational improvements as means to retain the Concept LOS should be undertaken prior to consideration of capacity increases. Included in this would be the development and implementation of access management plans, particularly for those segments where turning movements play a significant role in accidents or diminished operations.

This document was forwarded to San Joaquin Council of Governments for review. Comments were received on December 20 , 2011, and the TCR updated and revised to address those comments.

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT SAN JOAQUIN COUNTY SEGMENT 1



Segment Description:

Location:	County Line to Interstate 5		
Post Mile:	0.0/10.2	**Rural/Urban/Urbanized:**	Rural
Length:	10.20	**Within City Limits:**	No
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	SJ County

Roadbed Information

Number of Lanes:	2	**Bridge Name:**	Moke River & Little Potato Sl
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	110-310
Accessible to Bicycles:	yes	**Shoulder Width:**	4-10
Bridge Needs		**Median Width:**	n/a
Postmile	0.01 &R4.4	**Distressed Lane Miles**	18
Bridge#	20 0101 & 29 0043	**Present Serviceability Rating**	2

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C&E	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	yes	**Access to Intermodal Freight Facility**	no

Environmental Status

Resouce	Level of Impact	Resource	Level of Impact
Flood Plains:	High	**Cultural Resources:**	Moderate
Wetlands:	High	**Leaking Underground Tanks:**	Moderate
Special Status Species:	High	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 65 MPH
Existing Facility: 2-Lane Conventional Highway

	2008		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	E	E	E	E	F	F
Volume/Capacity:	0.68	0.71	0.92	0.95	1.23	n/a
Peak Hour Volume:	1900		2550		3430	
Average Daily Traffic:	15,350		20,630		27,720	
Peak Hour Directional Split:	55/45		55/45		55/45	
Truck Volume % of Total ADT:	14.0		14.0		14.0	
Peak Hour % of Trucks:	10.5		10.5		10.5	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility	Airports	Intermodal Commuter Facilities	Intermodal Freight Facilities
Yes/No yes	Yes/No No	Yes/No No	Yes/No No
PM 0.0/10.2	PM	PM	PM
Location Route	Location	Location	Location
Class III			
LOS F			

Pedestrian Facility	Park and Rides	Freight Distribution	Transit Bus
Yes/No No	Yes/No no	Yes/No No	Yes/No No
PM	PM	PM	PM
Location	Location I-5/Thornton	Location	Location
LOS			

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.26	**Fatal & Injury**	0.33
Total	0.55	**Total**	0.78

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** to **4/1/2010**

Segment Route Concept

Concept Level of Service:	C
Concept Facility	**2030** 4-E
Ultimate Transportation Corridor:	4-E
Comments:	

Planned Projects:

	Post Mile	Location	Description
⑩			
⑨			
⑧			
⑦			
⑥			
⑤			
④			
③			
②	5.0/9.5	Route	Structural Section Repair
①	0.0/10.1	Route	Opearational and Safety Improvemnts from I-5 to Bouldin Island

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM R4.24	TMS (2)	Existing	Existing
PM4.37	Radar Speed Sign	Existing	Existing
PM 5.52	TMS (2)	Existing	Existing
PM 5.39	TMS (2),RWIS	Proposed	Proposed
PM 7.30	CMS, TMS, RWIS	Proposed	Proposed
PM 7.50	EMS	Existing	Existing

Programmed Projects:

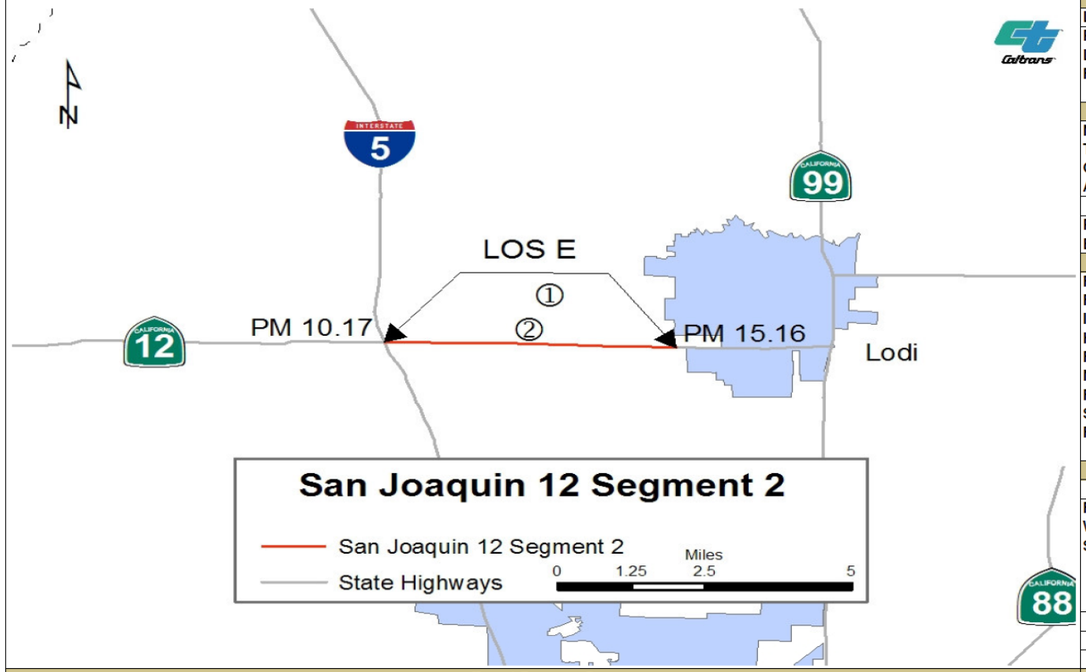
	Post Mile	Location	Description
❺			
❹	5.0/10.2	Glasscock Road	Operational Improvments/Smart Corridor
❸	R4.4	Little Potato Slough Bridge	Bearing Pad Replacement
❷	0.1/R 4.4	Boulding Island	Roadway Rehabilitation
❶	0.00	Mokelumne River Bridge	Three bridge repair or maintenance projects

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT SAN JOAQUIN COUNTY SEGMENT 2



Segment Description:

Location:	Interstate 5 to Lower Sacramento Rd.		
Post Mile:	10.2/15.2	**Rural/Urban/Urbanized:**	Rural
Length:	5.00	**Within City Limits:**	No
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	SJ County

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	N/A
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	100-300
Accessible to Bicycles:	yes	**Shoulder Width:**	4-10
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	10
Bridge#		**Present Serviceability Rating**	3

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C&E	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Low	**Cultural Resources:**	Moderate
Wetlands:	Low	**Leaking Underground Tanks:**	Moderate
Special Status Species:	Low to Moderate	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

	2008		2020		2030	
Existing Facility: 2-Lane Conventional Highway	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**
Level of Service:	E	E	E	E	F	F
Volume/Capacity:	0.52	0.52	0.7	0.7	0.94	0.94
Peak Hour Volume:	1,450		1,950		2,620	
Average Daily Traffic:	14,000		18,820		25,290	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	12.1		12.1		12.1	
Peak Hour % of Trucks:	9.1		9.1		9.1	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	10.2/15.2	PM		PM		PM	
Location	Route	Location		Location		Location	
Class	III						
LOS	D						

Pedestrian Facility		Park and Rides		Freight Distribution		Transit Bus	
Yes/No	Yes	Yes/No	yes	Yes/No	No	Yes/No	No
PM	9.92/10.00	PM	10.2	PM		PM	
Location	Valley Springs	Location	I-5/Thornton	Location		Location	
LOS	n/a						

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.37	**Fatal & Injury**	0.33
Total	0.98	**Total**	0.78

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **4/1/2010**

Segment Route Concept

Concept Level of Service:		C
Concept Facility	**2030**	4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM 10.3	TMS (2)	Proposed	Both
PM 10.65	TMS,CMS. CCTV	Proposed	WB
PM11.00	CMS	Planned	N/A
PM11.99	TMS (2)	Existing	Both
PM 12.51	TMS (2)	Existing	Both
PM14.0	EMS	Existing	WB

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Planned Projects:

	Post Mile	Location	Description
⑩			
⑨			
⑧			
⑦			
⑥			
⑤			
④			
③			
②	12.35	Union Pacific Railroad Crossing	Construct New Grade Crossing
①	10.1/15.2	Route	Widen from two to four lanes

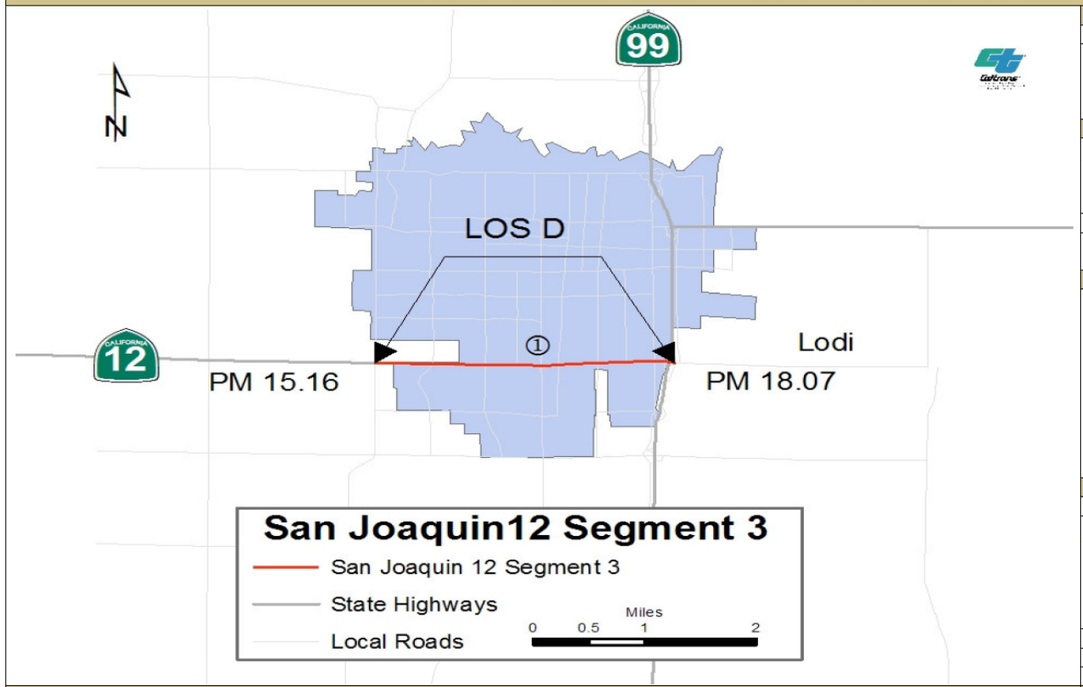
Programmed Projects:

	Post Mile	Location	Description
❺			
❹			
❸			
❷			
❶			

Comments:

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT | **SAN JOAQUIN COUNTY** | **SEGMENT 3**



Segment Description:

Location:	Lower Sacramento Rd. to SR-99S		
Post Mile:	15.2/18.1	**Rural/Urban/Urbanized:**	Urban
Length:	2.90	**Within City Limits:**	Yes
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	City of Lodi

Roadbed Information

Number of Lanes:	4	**Bridge Location:**	N/A
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	100-115
Accessible to Bicycles:	yes	**Shoulder Width:**	10-15
Bridge Needs		**Median Width:**	2-12
Postmile		**Distressed Lane Miles**	5
Bridge#		**Present Serviceability Rating**	3

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Low	**Cultural Resources:**	Moderate
Wetlands:	Low	**Leaking Underground Tanks:**	High
Special Status Species:	Low to Moderate	**Possible Hazardous Waste:**	High

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

	2008		2020		2030	
Base Free Flow Speed: 40 MPH **Existing Facility: 4-Lane Conventional Highway**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**
Level of Service:	n/a	D	n/a	F	n/a	F
Volume/Capacity:	-	0.7	-	0.94	-	1.26
Peak Hour Volume:	1,450		3,200		4,300	
Average Daily Traffic:	14,000		35,400		47,570	
Peak Hour Directional Split:	55/45		55/45		55/45	
Truck Volume % of Total ADT:	12.1		12.1		12.1	
Peak Hour % of Trucks:	7.1		7.1		7.1	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	yes	Yes/No	No	Yes/No	Yes	Yes/No	No
PM	15.2/18.1	PM		PM	17.4	PM	
Location	Route and Local	Location		Location	Stockton and Lodi Streets	Location	
Class	II and III						
LOS	D, not assessed						
Pedestrian Facility		**Park and Rides**		**Freight Distribution**		**Transit Bus**	
Yes/No	Yes	Yes/No	no	Yes/No	No	Yes/No	Yes
PM	13.87/18.2	PM		PM		PM	15.2/18.1
Location	Route and Local S	Location		Location		Location	
LOS							

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.77	**Fatal & Injury**	0.86
Total	2.81	**Total**	2.12

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **4/1/2010**

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
① 15.16/18.1	Route	Widen from four to six lanes

Segment Route Concept

Concept Level of Service: D
Concept Facility **2030** 6-C/6-E
Ultimate Transportation Corridor: 6-C/6-E
Comments:

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM 17.90	CMS	Planned	EB

Programmed Projects:

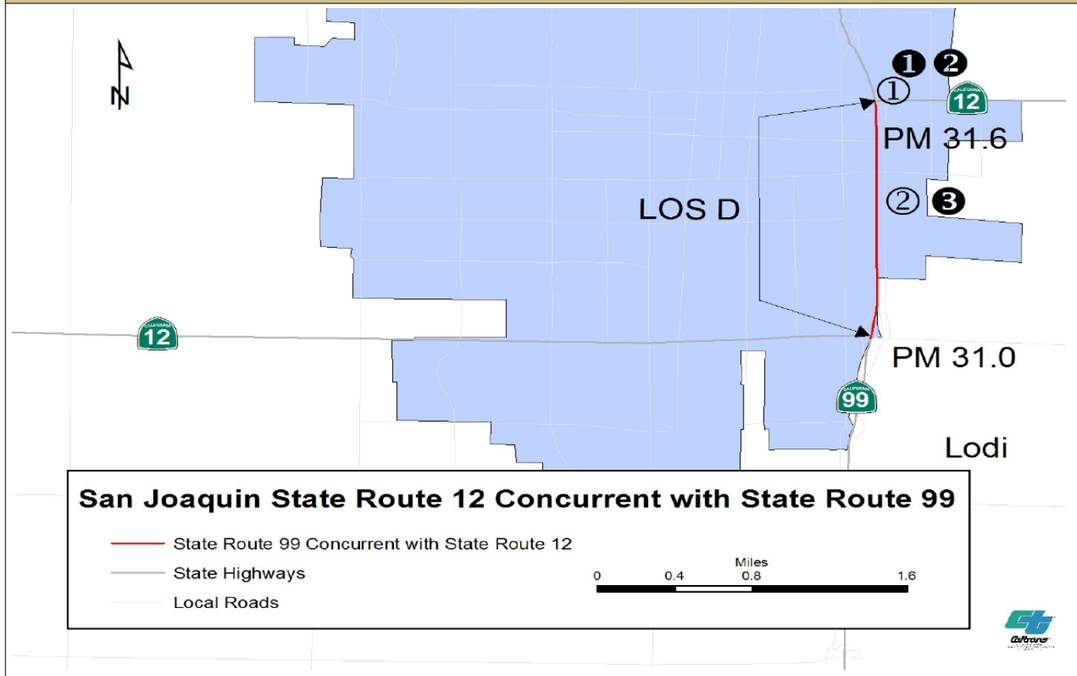
Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶		

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12	TRANSPORTATION CONCEPT REPORT	SAN JOAQUIN COUNTY	SR-99	CONCURRENT SEGMENT 1



Segment Location:

Description:	SR-99		
Post Mile:	31.0/31.6	**Rural/Urban/Urbanized:**	Urban
Length:	0.60	**Within City Limits:**	yes
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	City of Lodi

Roadbed Information

Number of Lanes:	4	**Bridge Location:**	
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	166-370
Accessible to Bicycles:	no	**Shoulder Width:**	8
Bridge Needs		**Median Width:**	10
Postmile		**Distressed Lane Miles**	24
Bridge#		**Present Serviceability Rating**	

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	F	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	yes	**National Network, Terminal Access**	NN
Focus Route/Gateway Route:	yes	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	yes	**Additional Restrictions**	no
Freeway Agreement:	yes	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Degree of Impact
Flood Plains:	High	**Cultural Resources:**	High
Wetlands:	Low-Mod	**Leaking Underground Tanks:**	Moderate
Special Status Species:	Mod to High	**Possible Hazardous Waste:**	High

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 65 MPH
Existing Facility: 2-Lane Conventional Highway

	2008		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	D		F		F	
Volume/Capacity:	n/a		n/a		n/a	
Average Daily Traffic:			64,000		80,500	
Peak Hour Volume:			7,250		9,700	
Peak Hour Directional Split:						
Truck Volume % of ADT:	13.7		13.7		13.7	
Peak Hour % of Trucks:	10.0		10.0		10.0	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility	Airports	Intermodal Commuter Facilities	Intermodal Freight Facilities
Yes/No No	Yes/No No	Yes/No No	Yes/No No
PM	PM	PM	PM
Location	Location	Location	Location
Class			
LOS			

Pedestrian Facility	Park and Rides	Freight Distribution	Transit Bus
Yes/No No	Yes/No Yes	Yes/No Yes (?)	Yes/No No
PM	PM 30.97	PM	PM
Location	Location SR-99 /SR-12	Location	Location
LOS			

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.01	**Fatal & Injury**	0.02
Total	0.21	**Total**	0.30

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2004** **to** **12/31/2006**

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
② 28.6/34.58	Harney Road to Petlier Road	Widen from four to six lanes
① 31.6	SR99 at Victor Road	Reconstruct interchange to allow six lanes through

Segment Route Concept

Concept Level of Service:		C
Concept Facility	**2030**	8-F
Ultimate Transportation Corridor:		8-F
Comments:		

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
30.53	Planned	SB	RWIS
30.76	Planned	SB	CMS/TMS

Programmed Projects:

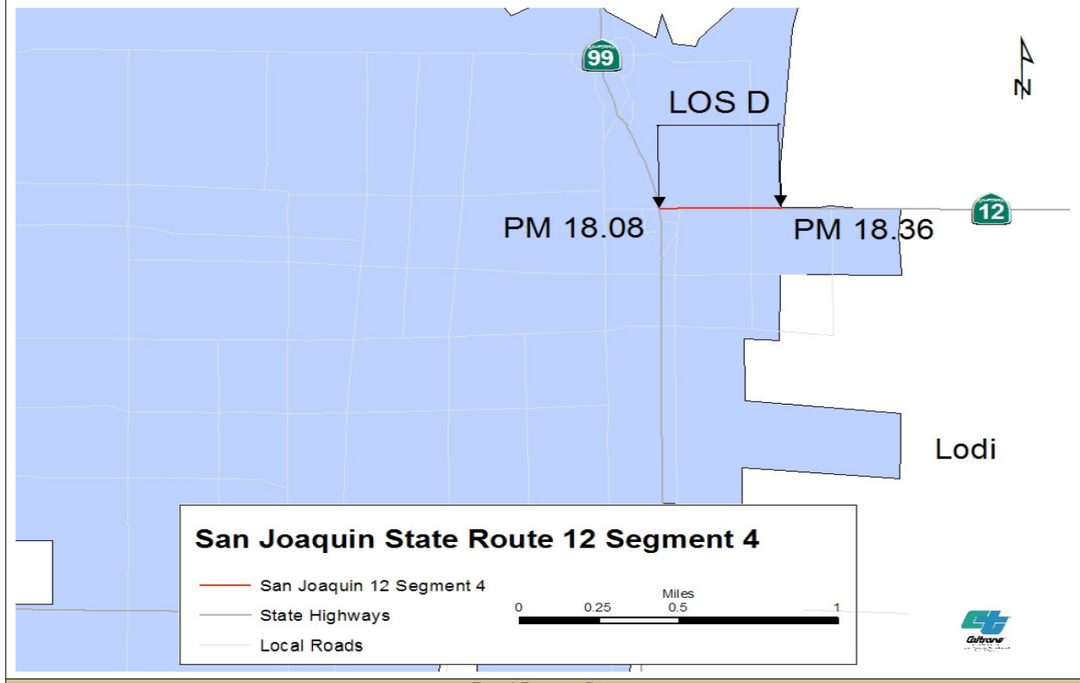
Post Mile	Location	Description
❺		
❹		
❸ 29.0/30.7	Route	SJ99 CAPM with slab grinding and overlay
❷ 22.9/38.8	Route	SJ99 CAPM
❶ 20.1/34.7	Route	Peltier Road Landscaping Upgrade

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments: Current and afuture traffic data obtained from SR-99 TCR (2003).

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT — SAN JOAQUIN COUNTY — SEGMENT 4



Segment Description:

Location:	SR-99N to Cluff Ave.		
Post Mile:	18.1/18.4	**Rural/Urban/Urbanized:**	Urban
Length:	0.30	**Within City Limits:**	Yes
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	City of Lodi

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	N/A
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	80
Accessible to Bicycles:	yes	**Shoulder Width:**	2-8
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	1
Bridge#		**Present Serviceability Rating**	3

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Low	**Cultural Resources:**	Moderate
Wetlands:	Low	**Leaking Underground Tanks:**	Moderate
Special Status Species:	Low	**Possible Hazardous Waste:**	High

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 40 MPH
Existing Facility: 2-Lane Conventional Highway

	2008		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	E	E	E	E	E	E
Volume/Capacity:	0.38	0.38	0.51	0.51	0.68	0.69
Peak Hour Volume:	1,100		1,480		1,990	
Average Daily Traffic:	11,800		15,860		21,310	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	6.0		6.0		6.0	
Peak Hour % of Trucks:	4.5		4.5		4.5	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility	Airports	Intermodal Commuter Facilities	Intermodal Freight Facilities
Yes/No yes	Yes/No No	Yes/No Yes	Yes/No No
PM 18.1/18.4	PM	PM 18.1	PM
Location Route and Local	Location	Location Stockton and Lodi Streets	Location
Class III			
LOS D, not assessed			

Pedestrian Facility	Park and Rides	Freight Distribution	Transit Bus
Yes/No No	Yes/No yes	Yes/No No (?)	Yes/No Yes
PM	PM 18.1	PM	PM 18.1/18.3
Location	Location SR-99 /SR-12	Location	Location
LOS			

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.82	**Fatal & Injury**	0.79
Total	3.27	**Total**	2.12

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 4/1/2007 to 4/1/2010

Segment Route Concept

Concept Level of Service: D
Concept Facility 2030 4-E
Ultimate Transportation Corridor: 4-E
Comments:

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
① 18.1/23.2	Route	Widen from two to four lanes

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction

Programmed Projects:

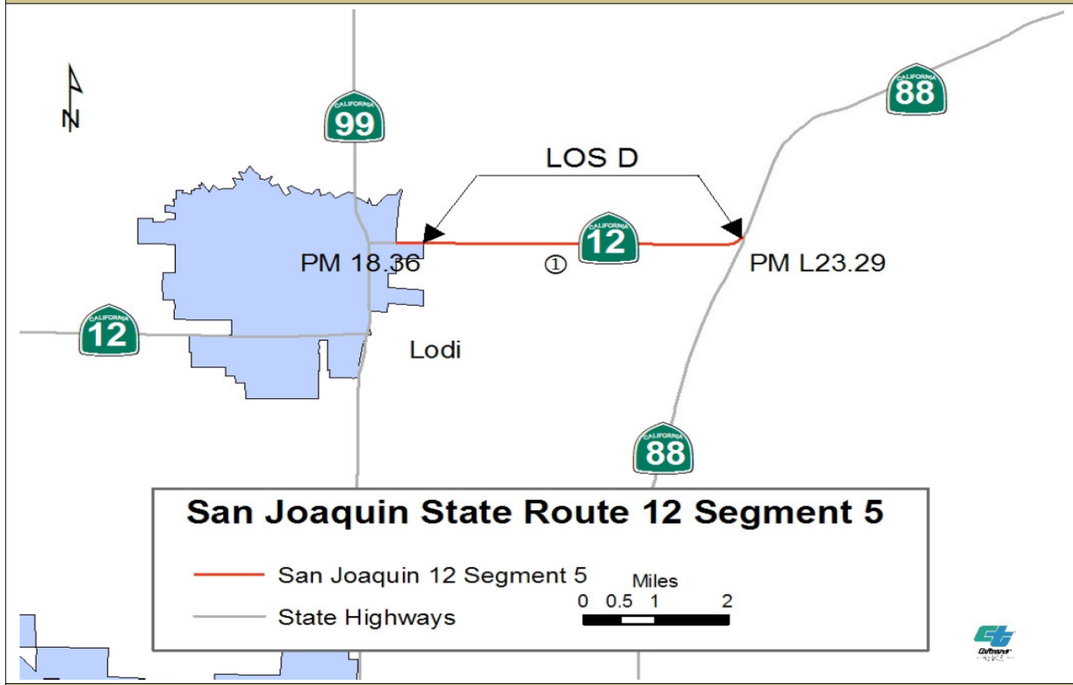
Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶		

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT — SAN JOAQUIN COUNTY — SEGMENT 5



Segment Description:

Location:	Cluff Ave. to SR-88S		
Post Mile:	18.4/L23.3	**Rural/Urban/Urbanized:**	Rural
Length:	4.80	**Within City Limits:**	No
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	SJ County

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	N/A
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	80
Accessible to Bicycles:	yes	**Shoulder Width:**	8
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	10
Bridge#		**Present Serviceability Rating**	4

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Moderate	**Cultural Resources:**	Moderate
Wetlands:	Low	**Leaking Underground Tanks:**	Moderate
Special Status Species:	Low	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 65 MPH Existing Facility: 2-Lane Conventional Highway	2008		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	D	D	D	D	E	E
Volume/Capacity:	0.3	0.3	0.4	0.4	0.53	0.53
Peak Hour Volume:	2,380		1,110		1,500	
Average Daily Traffic:	26,340		11,460		15,410	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	9.5		9.5		9.5	
Peak Hour % of Trucks:	4.4		4.4		4.4	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility	Airports	Intermodal Commuter Facilities	Intermodal Freight Facilities
Yes/No yes	Yes/No No	Yes/No No	Yes/No No
PM 18.4/	PM	PM	PM
Location Route	Location	Location	Location
Class III			
LOS C			

Pedestrian Facility	Park and Rides	Freight Distribution	Transit Bus
Yes/No No	Yes/No no	Yes/No No	Yes/No No
PM	PM	PM	PM
Location	Location	Location	Location
LOS			

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.83	**Fatal & Injury**	0.38
Total	1.64	**Total**	0.92

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **4/1/2010**

Segment Route Concept

Concept Level of Service:	C	
Concept Facility	2030	4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
① 18.1/23.2	Route	Widen from two to four lanes

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM 19.08	CMS	Planned	WB
PM 23.29	TMS (2)	Existing	Both

Programmed Projects:

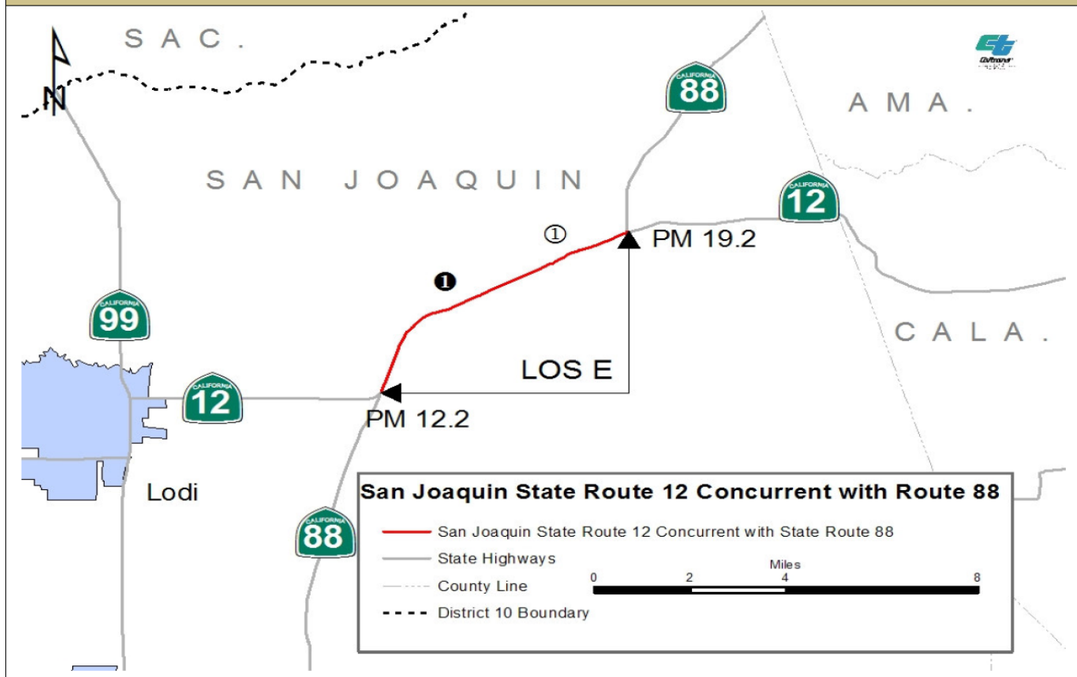
Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶		

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 | TRANSPORTATION CONCEPT REPORT | SAN JOAQUIN COUNTY | SR-88 | CONCURRENT SEGMENT 2



Segment Location:

Description:	SR-88		
Post Mile:	12.2/19.2	**Rural/Urban/Urbanized:**	Rural
Length:	7.00	**Within City Limits:**	No
Functional Classification:	C&E	**Local Planning Jurisdiction:**	San Joaquin

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	
Terrain:	level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	80-140
Accessible to Bicycles:	yes	**Shoulder Width:**	2-13
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	
Bridge#		**Present Serviceability Rating**	

Route Designations

Functional Classification:	C&E	**Scenic Highway (Designated):**	no
Facility Type:	yes	**Scenic Highway (Eligible)**	TA
Interregional Road System:	no	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	yes
Focus Route/Gateway Route:	yes	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	yes	**California Legal:**	no
Freeway Expressway System	no	**Advisory**	no
Strategic Highway Network	yes	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	

Environmental Status

Degree of Impact		Degree of Impact	
Flood Plains:	Low to Moderate	**Cultural Resources:**	Moderate
Wetlands:	Low-Mod	**Leaking Underground Tanks:**	Moderate-High
Special Status Species:	Low	**Possible Hazardous Waste:**	Low

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

	2008		2020		2030	
Base Free Flow Speed: Var.						
Existing Facility: 2-Lane Conventional Highway	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**
Level of Service:	E					
Volume/Capacity:	n/a		n/a		n/a	
Average Daily Traffic:						
Peak Hour Volume:						
Peak Hour Directional Split:						
Truck Volume % of Total ADT:						
Peak Hour % of Trucks:						

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	12.2/19.2	PM		PM		PM	
Location	Route and Local	Location		Location		Location	
Class	III						
LOS	not assessed						

Pedestrian Facility		Park and Rides		Freight Distribution		Transit Bus	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	12.2/19.2	PM		PM		PM	
Location	Route and Local	Location		Location		Location	
LOS	not assessed						

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	**Rate**	**Statewide Average**	**Rate**
Fatal & Injury		**Fatal & Injury**	
Total		**Total**	

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **to**

Segment Route Concept

Concept Level of Service:		C
Concept Facility	**2030**	2-C
Ultimate Transportation Corridor:		4-E
Comments:		

Planned Projects:

	Post Mile	Location	Description
⑩			
⑨			
⑧			
⑦			
⑥			
⑤			
④			
③			
②			
①	19.2/25.4	Clements area	Clements A/C Overalay

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction

Programmed Projects:

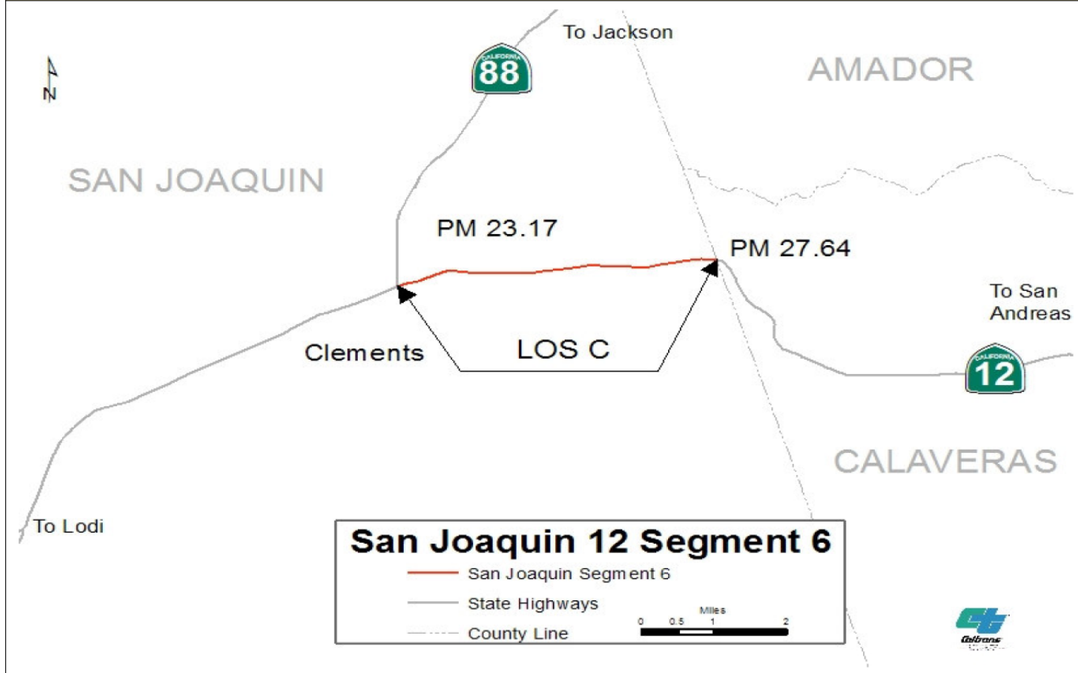
	Post Mile	Location	Description
❺			
❹			
❸			
❷			
❶	12.2/19.2	S-12 W intersection to SR-12 E Intersection	Widen from two to four lanes

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments: Data collection and analysis conducted for comparison to conditions on State Route 12, and are not indicative of specific conditions and needs on the segment of State Route 88. Consult system planning statements or TCRs which address this route.

SAN JOAQUIN COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT SAN JOAQUIN COUNTY SEGMENT 6



Segment Description:

Location:	SR-88N to County Line		
Post Mile:	23.3/27.6	**Rural/Urban/Urbanized:**	Rural
Length:	4.40	**Within City Limits:**	No
Functional Classification:	Minor Arterial	**Local Planning Jurisdiction:**	SJ County

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	N/A
Terrain:	rolling	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	100
Accessible to Bicycles:	yes	**Shoulder Width:**	4-8
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	8
Bridge#		**Present Serviceability Rating**	3

Route Designations

Functional Classification:	Minor Arterial	**Scenic Highway (Designated):**	no
Facility Type:	C	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	no	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Degree of Impact
Flood Plains:	Low	**Cultural Resources:**	Moderate
Wetlands:	Moderate	**Leaking Underground Tanks:**	Low
Special Status Species:	High	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 65 MPH	2008		2020		2030	
Existing Facility: 2-Lane Conventional Highway	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**
Level of Service:	D	D	D	D	E	D
Volume/Capacity:	0.32	0.32	0.39	0.39	0.53	0.53
Peak Hour Volume:	790		1,060		1,430	
Average Daily Traffic:	7,100		9,540		12,820	
Peak Hour Directional Split:	55/45		55/45		55/45	
Truck Volume % of Total ADT:	7.2		7.2		7.2	
Peak Hour % of Trucks:	5.4		5.4		5.4	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	6	PM		PM		PM	
Location	Route	Location		Location		Location	
Class	III						
LOS	D						
Pedestrian Facility		**Park and Rides**		**Freight Distribution**		**Transit Bus**	
Yes/No	Yes	Yes/No	no	Yes/No	No	Yes/No	No
PM	15.2/18.1	PM		PM		PM	
Location	Route and Local S	Location		Location		Location	
LOS	n/a						

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.23	**Fatal & Injury**	0.36
Total	0.54	**Total**	0.80

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **4/1/2010**

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
①		

Segment Route Concept

Concept Level of Service:		C
Concept Facility	**2030**	4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction

Programmed Projects:

Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶		

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

CALAVERAS COUNTY SUMMARY

Three segments of SR-12 were analyzed in Calaveras County. As explained above, the division of these segments followed considerations of changes in traffic volume or its composition, a change in the number of lanes, whether the segment was urban or rural, and changes in transportation planning or land use planning agency. This method deviates from that suggested in HCM (2000) p21-13, but provides for a more concise characterization for the need for capacity increases, verses operation improvements outside this document's scope.

SR-12 serves four communities in Calaveras County --Wallace, Burson, Valley Springs, and San Andreas. These communities (with the exception of San Andreas) share the historic connection via the San Joaquin Sierra Nevada spur line, and historically were agricultural (olives, livestock). Historically, San Andreas, the County Seat, relied upon mineral extraction (gold, cement), and had a far more developed infrastructure than the three satellite communities. All can be characterized as bedroom communities. With the largest employers in the County (government, education, medical) located in San Andreas, commuter patterns are distorted by commutes east into San Andreas, as well as the commute west wards to Lodi, Stockton, or Sacramento.

The population of these communities is generally smaller and their composition more homogeneous than that of San Joaquin County communities. Whites make up 75 to 90% of the community population, with significant minorities being of Latino and Native American/Alaskan descent. Household median income is below the state average, with a large number of residents employed in the construction or hospitality industries.

Calaveras County is currently updating their General Plan. Significant local concern with rural sprawl may result in land use policies aimed at increased population density within community cores, and could function to increase traffic volumes in Valley Springs, Burson, and Wallace. Currently, the primary land use designation within the corridor is residential and agriculture, though commercial development is notable along the highway in Valley Springs.

Calaveras County's rural character and small population (less than 50,000) implies there are few opportunities for multimodal commutes. Currently transit is provided on SR-12 between SR-49 and Valley Springs. SR-12 supported an interregional bus connection that has been cut due to low ridership. Calaveras Transit is currently considering resuming the service on routes that access Stockton rather than Lodi. Although SR-12 is a Class III bicycle route, narrow to non-existent shoulders and non-standard lane widths inhibit bicycle use. Sidewalks and other pedestrian amenities are present in areas of Valley Springs, but not elsewhere on the route. Access to the Coast to Crest Trail is provided via SR-12 to the Mokelumne River north of Valley Springs.

SR-12 has a significant role in the movement of goods and services in Calaveras County. SR-12 lacks the truck advisory segments found on other State highways accessing Calaveras (the one exception being the California legal designation on SR-49 between Calaveras and Amador Counties), and functions as the Terminal Access Route connecting the county to the National Network.

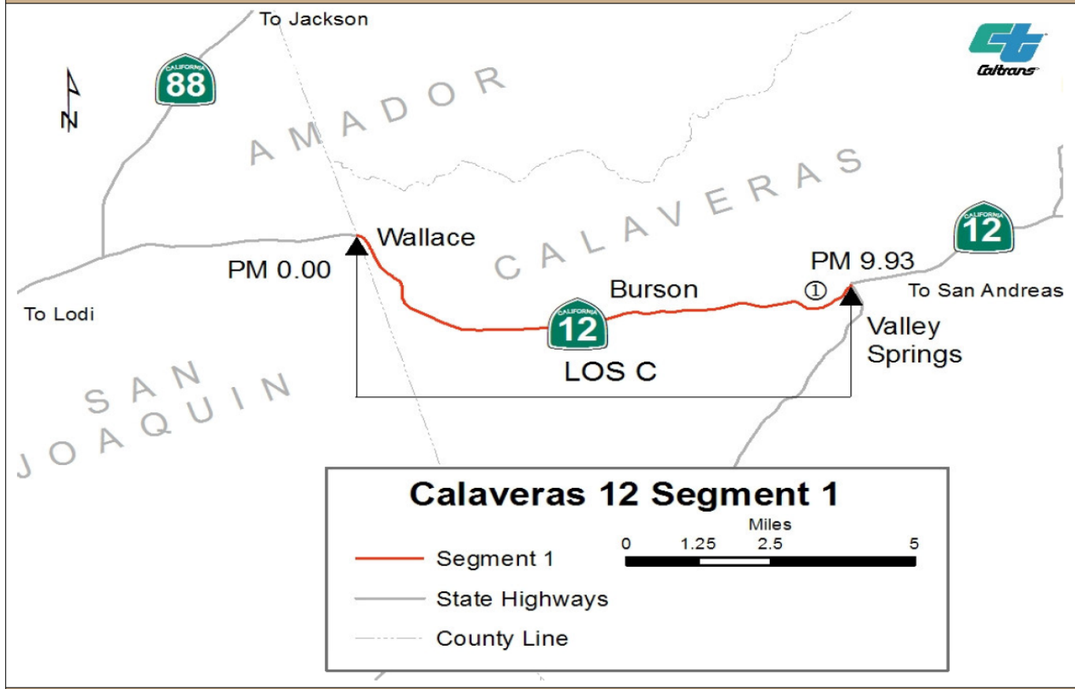
Segments 2 and 3 were analyzed employing the grade adjustment factor for rolling terrain, although both segments have portions in which grades 3% or greater have been estimated. HCM (2000) p. 20-8 in discussing rolling terrain, recommends that segments with substantial lengths of more than a 4% grade should be analyzed with the specific grade procedure for directional segments. The procedure is described pp 20-14:20-20. This procedure was not applied as it addresses specific operational considerations (auxiliary lanes) outside the scope of this document. Although the presence of these features makes the LOS calculations questionable in that they may overestimate flow rates, but past improvements (west bound truck climbing lane, east bound passing lane) may potentially mitigate against this.

The unidirectional auxiliary lanes present in Segments 2 and 3 present methodological complications to analysis of LOS. HCS version 5.3 does not take into account passing opportunities, while HIGHPLAN considers passing lanes in a bidirectional context. When attempting to include them in the HIGHPLAN analysis, the outcomes result in an LOS discrepant from the LOS obtained by HCS version 5.3(e.g. B/D or C/E). For the purposes of this evaluation they were excluded from the analysis, but it is presumed that an operational analysis of these segments might indicate less congested conditions.

This document was forwarded to Calaveras Council of Governments for review. Comments were received on December 20, 2011, and the TCR updated and revised to address those comments.

CALAVERAS COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT — CALAVERAS COUNTY — SEGMENT 1



Segment Description:

Location:	San Joaquin County to SR-26 West		
Post Mile:	0.00-9.927	**Rural/Urban/Urbanized:**	Rural
Length:	9.90	**Within City Limits:**	no
Functional Classification:	minor arterial	**Local Planning Jurisdiction:**	Calaveras County

Roadbed Information

Number of Lanes:	2	**Bridge Name:**	n/a
Terrain:	Rolling	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	60-100
Accessible to Bicycles:	yes	**Shoulder Width:**	2-8
Bridge Needs		**Median Width:**	n/a
Postmile		**Distressed Lane Miles**	13
Bridge#		**Present Serviceability Rating**	1

Route Designations

Functional Classification:	minor arterial	**Scenic Highway (Designated):**	no
Facility Type:	conventional	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	no	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Degree of Impact		**Degree of Impact**	
Flood Plains:	Low	**Cultural Resources:**	High
Wetlands:	Moderate	**Leaking Underground Tanks:**	Moderate
Special Status Species:	High	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Attainment (Unclassified)	Attainment (Unclassified)	Attainment (Unclassified)

Travel Forecast Data

Base Free Flow Speed: 60 MPH Existing Facility: 2-Lane Conventional Highway	2009		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	C	D	D	D	D	E
Volume/Capacity:	0.33	0.31	0.39	0.36	0.50	0.46
Peak Hour Volume:	820		1050		1340	
Average Daily Traffic:	7,500		9,600		12,300	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	6.8%		6.8%		6.8%	
Peak Hour % of Trucks:	5.1%		5.1%		5.1%	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	0.0/9.93	PM		PM		PM	
Location	on route	Location		Location		Location	
Class	III						
LOS	D						

Pedestrian Facility		Park and Rides		Freight Distribution		Transit Bus	
Yes/No	No	Yes/No	No	Yes/No	No	Yes/No	No
PM		PM		PM		PM	
Location		Location		Location		Location	
LOS							

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.29	**Fatal & Injury**	0.37
Total	0.70	**Total**	0.83

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **3/31/2010**

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
① 9.5/10.5	Valley Springs	Valley Springs Bypass

Segment Route Concept

Concept Level of Service:	C	
Concept Facility	**2030**	4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM 9.1	CMS	Proposed	EB
PM 9.78	CCTV	Proposed	N/A

Programmed Projects:

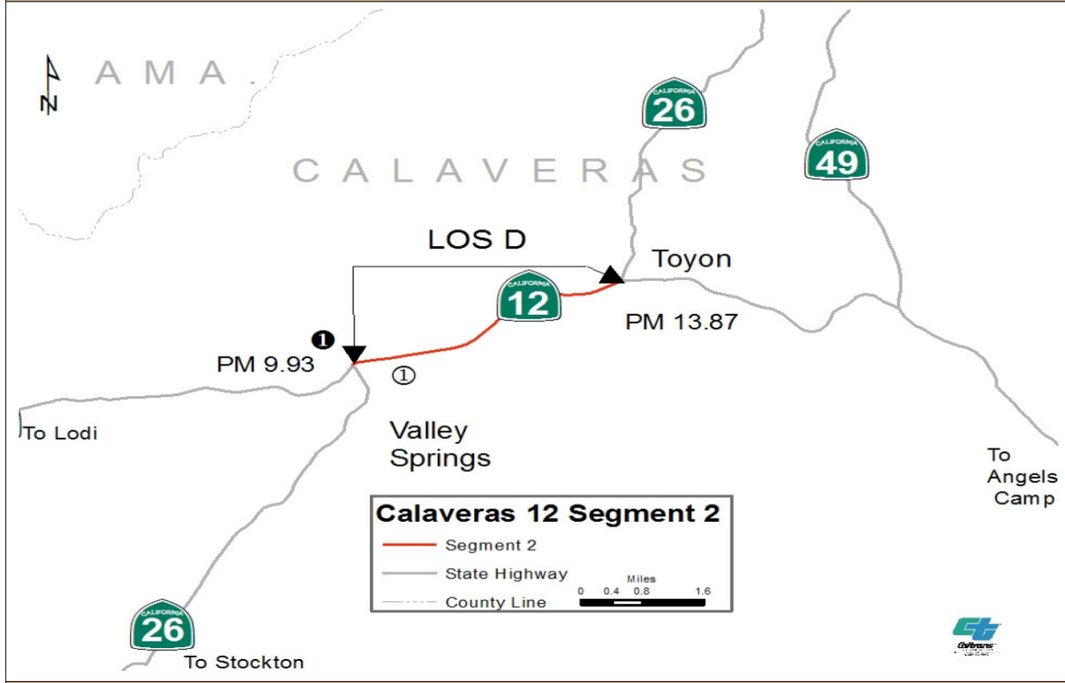
Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶		

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

CALAVERAS COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT | **CALAVERAS COUNTY** | **SEGMENT 2**



Segment Description:

Location:	SR-26 West to SR-26 East		
Post Mile:	9.927-13.872	**Rural/Urban/Urbanized:**	Rural
Length:	2.90	**Within City Limits:**	no
Functional Classification:	minor arterial	**Local Planning Jurisdiction:**	Calaveras County

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	Cosgrove Creek
Terrain:	Rolling	**Lane Width:**	12
Grade %	3%	**Right of Way Width:**	80-110
Accessible to Bicycles:	yes	**Shoulder Width:**	0-4
Bridge Needs		**Median Width:**	n/a
Postmile	10.32	**Distressed Lane Miles**	10
Bridge#	30 0002	**Present Serviceability Rating**	2

Route Designations

Functional Classification:	minor arterial	**Scenic Highway (Designated):**	no
Facility Type:	conventional	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	no	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Low	**Cultural Resources:**	High
Wetlands:	Low	**Leaking Underground Tanks:**	Moderate
Special Status Species:	Moderate	**Possible Hazardous Waste:**	High

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Attainment (Unclassified)	Attainment (Unclassified)	Attainment (Unclassified)

Travel Forecast Data

Base Free Flow Speed: 60 MPH Existing Facility: 2-Lane Conventional Highway	2009		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	D	D	D	D	D	D
Volume/Capacity:	0.33	0.31	0.39	0.36	0.5	0.46
Peak Hour Volume:	0		825		1,060	
Average Daily Traffic:	7,000		8,960		11,500	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	6.1%		6.1%		6.1%	
Peak Hour % of Trucks:	4.6%		4.6%		4.6%	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multimodal at this time.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	9.93/13.87	PM		PM		PM	
Location	on route	Location		Location		Location	
Class	III						
LOS	C						
Pedestrian Facility		**Park and Rides**		**Freight Distribution**		**Transit Bus**	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	Yes
PM	9.92/10.00	PM		PM		PM	9.97/13.9
Location	Valley Springs	Location		Location		Location	Valley Springs
LOS	n/a						

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.41	**Fatal & Injury**	0.38
Total	1.30	**Total**	0.84

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **3/31/2010**

Planned Projects:

Post Mile	Location	Description
⑩		
⑨		
⑧		
⑦		
⑥		
⑤		
④		
③		
②		
① 9.5/10.5	Valley Springs	Valley Springs Bypass

Segment Route Concept

Concept Level of Service: C
Concept Facility 2030 4-E
Ultimate Transportation Corridor: 4-E
Comments:

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
PM10.00	RWIS	Proposed	N/A
PM 11.2	CMS	Proposed	WB

Programmed Projects:

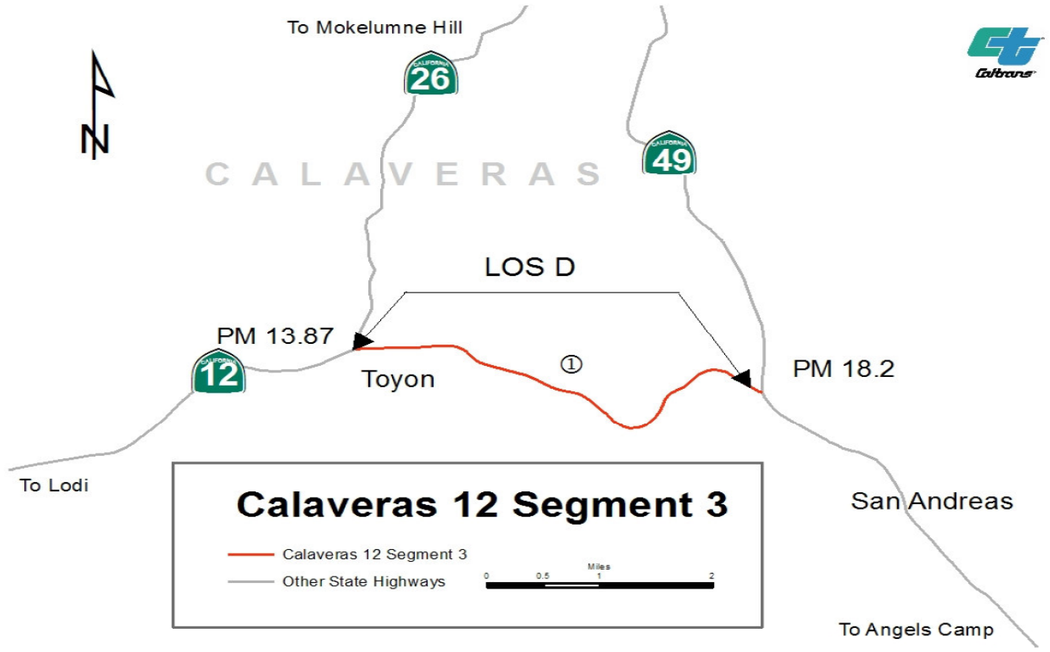
Post Mile	Location	Description
❺		
❹		
❸		
❷		
❶ 9.93	Valley Springs	SR-12 and SR-26 Intersection Improvement

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

CALAVERAS COUNTY SEGMENT FACT SHEETS

STATE ROUTE 12 TRANSPORTATION CONCEPT REPORT — CALAVERAS COUNTY — SEGMENT 3



Segment Description:

Location:	SR-26 East to SR-49		
Post Mile:	13.872-18.201	**Rural/Urban/Urbanized:**	Rural
Length:	4.30	**Within City Limits:**	no
Functional Classification:	minor arterial	**Local Planning Jurisdiction:**	Calaveras County

Roadbed Information

Number of Lanes:	2	**Bridge Location:**	N. Fork Calaveras River
Terrain:	Rolling	**Lane Width:**	12
Grade %	3%	**Right of Way Width:**	80-110
Accessible to Bicycles:	yes	**Shoulder Width:**	0-2
Bridge Needs		**Median Width:**	n/a
Postmile	17.25	**Distressed Lane Miles**	8
Bridge#	30 0007	**Present Serviceability Rating**	3

Route Designations

Functional Classification:	minor arterial	**Scenic Highway (Designated):**	no
Facility Type:	conventional	**Scenic Highway (Eligible)**	no
Interregional Road System:	yes	**Trucking Network:**	
High Emphasis Route:	no	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	no	**Surface Transportation Assistance Act (STAA)**	yes
National Highway System	no	**California Legal:**	yes
Freeway Expressway System	yes	**Advisory**	no
Strategic Highway Network	no	**Additional Restrictions**	no
Freeway Agreement:	no	**Access to Intermodal Freight Facility**	no

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	Low	**Cultural Resources:**	High
Wetlands:	Low	**Leaking Underground Tanks:**	Modeerate
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Attainment (Unclassified)	Attainment (Unclassified)	Attainment (Unclassified)

Travel Forecast Data

Base Free Flow Speed: 60 MPH Existing Facility: 2-Lane Conventional Highway	2009		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
Level of Service:	D	D	D	D	E	E
Volume/Capacity:	0.35	0.37	0.45	0.46	0.58	0.58
Peak Hour Volume:	0		960		1,230	
Average Daily Traffic:	7,500		9,600		12,300	
Peak Hour Directional Split:	50/50		50/50		50/50	
Truck Volume % of Total ADT:	6.7%		6.7%		6.7%	
Peak Hour % of Trucks:	5.0%		5.0%		5.0%	

Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi modal at this time.

Existing Transportation Network

Bicycle Facility	Airports	Intermodal Commuter Facilities	Intermodal Freight Facilities
Yes/No Yes	Yes/No No	Yes/No No	Yes/No No
PM 13.87/18.2	PM	PM	PM
Location on route	Location	Location	Location
Class III			
LOS C			

Pedestrian Facility	Park and Rides	Freight Distribution	Transit Bus
Yes/No No	Yes/No No	Yes/No No	Yes/No Yes
PM	PM	PM	PM 13.9/18.1
Location	Location	Location	Location Valley Springs
LOS			

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.72	**Fatal & Injury**	0.38
Total	1.39	**Total**	0.86

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **4/1/2007** **to** **3/31/2010**

Planned Projects:

	Post Mile	Location	Description
⑩			
⑨			
⑧			
⑦			
⑥			
⑤			
④			
③			
②			
①	13.87/18.20	Toyon to San Andreas	Widen from two to four lanes

Segment Route Concept

Concept Level of Service:		C
Concept Facility	**2030**	4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction

Programmed Projects:

	Post Mile	Location	Description
❺			
❹			
❸			
❷			
❶			

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments:

APPENDIX A: ACRONYMS

AADT Annual Average Daily Traffic
ACE Altamont Commuter Express
ACOE US Army Corps of Engineers
ACTC Amador County Transportation Commission
ADT Average Daily Traffic
AHS Automated Highway System
ALP Alpine County
AMA Amador County
APE Area of Potential Effects
ATIS Advance Transportation Information System
ATSD Advanced Transportation System Development
AVI Automated Vehicle Identification

BN&SF Burlington Northern and Santa Fe Railroad

CAL Calaveras County
CALACOG Calaveras Council of Governments
CAT Ceres Area Transit
CAWS Caltrans Automated Warning System
CBD Central Business District
CCAA California Clean Air Act
CCTV Closed-Circuit Television
CEQA California Environmental Quality Act
CFR Code of Federal Regulations
CHIN California Highway Information Network
CHP California Highway Patrol
CIP Congestion Improvement Program
CMAQ Congestion Mitigation and Air Quality (Improvement Program)
CMIA Corridor Mobility Improvement Account
CMP Congestion Management Plan
CMS Changeable Message Sign
CNDDB California Natural Diversity Data Base
CO Carbon Monoxide
COG Council of Governments
CSIP Corridor Safety Improvement Program
CSMP Corridor System Management Plan
CSS Context Sensitive Solutions
CTC California Transportation Commission
CTIS California Transportation Investment Strategy
CAMP Coastal Zone Management Plan
DSMP District System Management Plan

EB Eastbound
E/O East Of
EPA Environmental Protection Agency
ESA Environmental Sensitivity Area
ETTM Electronic Toll Collection and Traffic Management
EXPW Expressway

FES Freeway and Expressway System
FAT Fatalities
FEMA Federal Emergency Management Administration
FHWA Federal Highway Administration
FIS Federal Inspection Facility
FSP Freeway Service Patrol
FY Fiscal Year

GVC Great Valley Center

HAR Highway Advisory Radio
HICOMP State Highway Congestion Monitoring Program
HOV High Occupancy Vehicle
HPSR Historic Property Survey Report

I/C Interchange
ICES Inter-modal Corridor of Economic Significance
IIP Interregional Improvement Program
IRRS Interregional Road System
ISTEA Intermodal Surface Transportation Efficiency Act
IT Information Technology
ITMS Intermodal Transportation Management System
ITS Intelligent Transportation Systems
ITSP Interregional Transportation Strategic Plan

JCT Junction

LOS Level of Service
LROP Long Range Operations Plan
LRT Light Rail Transit
LU A Legacy for Users

MAX Modesto Area Express
MCAG Merced County Association of Governments
MCLT Mariposa County Local Transportation Commission
MCTC Madera County Transportation Commission
MER Merced County
MIS Major Investment Study
MOU Memorandum of Understanding
MPA Mariposa County
MPA LTC Mariposa County Local Transportation Commission
MSL Maintenance Service Level
MTC Metropolitan Transportation Commission
MTP Metropolitan Transportation Plan

NAAQS National Ambient Air Quality Standards
NAFTA North American Free Trade Agreement
NB Northbound
NEPA National Environmental Policy Act
NHS National Highway System
NAC Noise Abatement Criteria
NEPA National Environmental Policy Act
N/O North Of
NTN National Truck Network

OC Over-crossing
OH Overhead
OWP Overall Work Program

RAS Regional Arterial System
RCMP Regional Congestion Management Plan
RCR Route Concept Report
RIP Regional Improvement Plan
ROW Right-of-Way
RT Regional Transit

APPENDIX A: ACRONYMS

RTE Route
RTIP Regional Transportation Improvement Program
RTIF Regional Transportation Impact Fee
RTP Regional Transportation Plan
RTPA Regional Transportation Planning Agency
R/W Right of Way
RWIS Roadside Weather Information System

SACOG Sacramento Area Council of Governments
SAFETY Safe, Accountable, Flexible, Efficient Transportation Equity Act
SB Southbound
SHOPP State Highway Operations Protection Program
SIP State Implementation Plan
SJ San Joaquin County
SJCOG San Joaquin Council of Governments
SJRRC San Joaquin Regional Rail Commission
SJRTD San Joaquin Regional Transit District
SJV San Joaquin Valley
SJVUAPCD San Joaquin Valley Unified Air Pollution Control District
SMART Stockton Metropolitan Area Rapid Transit
S/O South of
SOP Status of Projects
SOV Single Occupancy Vehicle
SP(RR) Southern Pacific Railroad
SR State Route
STA Stanislaus County
STAA Surface Transportation Assistance Act
StanCOG Stanislaus Council of Governments
StaRT Stanislaus Regional Transit
STIP State Transportation Improvement Program
STRAIN Structures Replacement and Improvement Needs
STRAHNET Strategic Highway Network

TA Terminal Access
TASAS Traffic Accident Surveillance and Analysis System
TBD To Be Determinied
TCCAPC Tuolumne County / Cities Area Planning Council
TCM Transportation Control Measure
TCR Transportation Concept Report
TCRP Traffic Congestion Relief Program
TDM Transportation Demand Management
TCTC Tuolumne County Transportation Council
TEA-21 Transportation Equity Act of the 21st Century
TMA Transportation Management Association/Area
TMC Transportation Management Center
TMS Traffic Monitoring Station or Transportation Management System
TOS Traffic Operations System
TPA Transportation Planning Agency
TSDP Transportation System Development Plan
TSM Transportation System Management
TUO Tuolumne County

UAPCD Unified Air Pollution Control Districts
UC Under-crossing
UP(RR) Union Pacific Rail Road
UTC Ultimate Transportation Corridor

V/C Volume to Capacity
VMT Vehicle Miles Traveled

WB Westbound

YARTS Yosemite Area Regional Transportation System

APPENDIX B: GLOSSARY

Bicycle Routes: Refers to travelways specific to users employing bicycles. There are three general classifications: 'III'--bicycles share street with automobiles without separation; 'II'--bicycles share street within their own designated lane; and 'I'--bicycles travel independent of automobile traffic, often sharing right of way with pedestrians or equestrians.

California Environmental Quality Act (CEQA): Passed in 1971, CEQA provides the framework in which undertakings that may affect the environment are evaluated and if found to be adverse are to be mitigated for, as part of the governmental decision making process. For local governments, implementation of general plans and land use designations became a requirement and a bench mark for which changes in zoning or land uses could be assessed.

Census Designation: The designation of *rural* (population below 5,000), *or urbanized* (population between 5,000 and 50,000), or *urban* (populations of 50,000 or greater) highways are obtained from the California Road System Maps published by FHWA, based upon census designed urbanized areas, and urbanized clusters. The most recent version dates from 2007.

Concept Level of Service: see *Level of Service.*

Concept Facility: Highway facility that best maintains the Concept LOS at the end of the twenty year planning period.

Conventional Highway: Highway which permits direct access by both road intersections and driveways.

Expressway: Highway, usually an arterial, typically with access limited to at grade road intersections

Federal Highway System: Designated by the Federal Highway Administration, these segments of state highways serve to either support interstate commerce, national defense, or other responsibilities of the federal government. As such they are eligible for federal funding, and subject to the National Environmental Policy Act (NEPA).

Focus Route: see *Interregional Road System.*

Freeway: A divided arterial highway with full access control and grade separations at intersections.

Highway Capacity Manual (HCM): Published by the National Research Council's Transportation Research Board, the HCM is the national standard for methodologies to evaluate and estimate highway performance. Approved software packages developed to reduce the computation effort associated with the HCM are Highway Capacity Software's (HCS) various modules and the Florida Department of Transportation's ARTPLAN, FREEPLAN, and HIGHPLAN. The most recent update of HCM is for 2010, though several of the software interfaces are not yet currently available. Analyses performed for this document were consistent with HCM 2000.

High Emphasis Route: see *Interregional Road System.*

Highway Capacity Software (HCS): see *Highway Capacity Manual*.

Interregional Road System (IRRS): A State planning effort that emphasized highways within the Freeway and Expressway system that provided network connections to urban places statewide, but were not yet constructed to freeway or expressway standards. The most recent expression of this plan (1998) discussed Focus and High Emphasis routes, and established short term and long term improvements for these specific routes.

Level: see *Terrain.*

Level of Service (LOS): A qualitative performance measure that describes the perception of the commuter (driver, bicyclist, pedestrian, transit) of the operational conditions within a traffic stream on a highway segment. Generally scaled in a range from A through F, and historically as a performance measure for automobiles, the LOS targets optimal utility expressed as the *concept LOS* (C for rural highways on the IRRS, D for urban highways on the IRRS and all routes not on the IRRS). Although the current version of the Highway Capacity Manual includes LOS calculations for users other than drivers, standards have yet to be established by the State.

Mountainous: see *Terrain.*

National Environmental Policy Act (NEPA): Established in 1971, this environmental policy applies to federal undertakings or efforts that have a federal nexus. Federal agencies were tasked to develop policies and standards to evaluate and assess the environmental impacts of federal undertakings, while the Act established general policies regarding public notification and report standards.

Rolling: see *Terrain.*

Rural: see *Census Designation.*

Terrain: refers to topography specific to its affect on trucks and other heavy vehicle operation (see HCM). Level terrain contains any combination of grades or horizontal or vertical alignments that permit heavy vehicles to maintain the same speed as passenger cars; rolling terrain contains any combination of grades or horizontal or vertical alignments that causes heavy vehicles to reduce their speed substantially below that of passenger car speeds, but not to where they crawl for a significant length of time; mountainous terrain is any combination of grades or horizontal or vertical alignment that causes heavy vehicles to operate at crawl speed for significant distances or at frequent intervals. HCM methodologies address highway segments with level or rolling terrain with a set of constant values. Mountainous terrain requires separate upgrade or downgrade analysis, and recommends that any segment with grades between 2% and 3% with a length of more than half a mile be considered a separate segment.

Surface Transportation Assistance Act (STAA): Federal highway legislation that included federal design standards and requirements for trucks (see Truck Routes).

Truck Routes: may refer to either federal standards (contained in STAA) or California standards. Routes with an STAA designation permit travel by tractor trailers with a fifty five foot long trailer, or tandems with trailers no greater than twenty eight and a half feet, while California legal routes limit the overall truck length to sixty five feet total for single and seventy five for tandems. Advisory truck routes usually possess highway geometrics that limit truck length for safe operation. Restricted truck routes have legal restrictions on the type of truck or activity.

Urban: see *Census Designation.*

Urbanized: see *Census Designation.*

APPENDIX C: END NOTES

[1] This estimate is a lower bound, as ice melt from glaciers and icesheets have yet to be parameterized. Recent studies suggest the contribution from glaciers and icesheets might double the rate of sea level rise.

[2] "Delta Subsidence in California-- The Sinking Heart of the State" USGS FS-05-00, April 2000;

[3] "Human Contribution to More Intense Precipitation Extremes" *Nature* 470:378-381 Min et al. 2011

"Anthropogenic Greenhouse Gas Contribution to Flood Risk in England and Wales Autumn 2000" *Nature* 470: 382-385, Pall, P. et al. 2011

[4] The project is identified in the San Joaquin Council of Government's 2011 Regional Transportation Plan as tier I, with a construction year of 2032. Currently, the project is not on FTIP, nor is there a current Project Initiation Document, and its completion date is beyond the planning horizon for this document, although it is financially constrained.

APPENDIX D: STATE ROUTE 12 TCR FOR SACRAMENTO COUNTY SEGMENT

This section reports on District 10's effort to characterize current and future traffic volumes on SR-12 within District 3, and is presented here as an appendix. District 10 undertook the effort in part to provide a Caltrans planning document consistent with the *SR-12 Comprehensive Corridor Evaluation (Corridor Evaluation)* time frame, that was developed in partnership with the Metropolitan Transportation Commission, Solano County Council of Governments (SOCOG), Sacramento (SACOG, San Joaquin County Council of Governments (SJCOG), and Caltrans Districts 3, 4, and 10.

The Transportation Concept Report (TCR) provides long range system planning for highways, and identifies the potential future need for capacity increasing improvements. Employing Highway Capacity Manual (HCM2010) methodologies, the TCR projects current traffic volumes twenty years into the future and compares future outcomes with the current facility and concept level of service (LOS), recommends future concept facilities, and defines the Ultimate Transportation Corridor (UTC) needed for the preservation of future right of way beyond its twenty year planning horizon.

Within District 3, SR-12 is on the Interregional Road System, but is not a High Emphasis or Focus Route. The concept LOS standard for rural highway facilities is 'D' and for urban facilities is 'E'. Identified as a component of the Freeway and Expressway System, SR-12's minimal concept facility is expressway, outside of contexts where sensitive resources may require that facilities retain conventional highway characteristics.

The Federal Highways Administration (FHWA) has functionally classified SR-12 as a Principal Arterial that is on the Federal Highway System (FHS). SR-12 is a terminal access route consistent with the Surface Transportation Assistance Act's provisions throughout its entire length. SR-12 is bicycle and pedestrian accessible, but is not designated or considered eligible for state or federal scenic highway status.

Current or future LOS for SR-12 exceeds concept LOS. The concept facilities required to address these deficiencies would employ installation of passing lanes with the existing lane configuration. No current programmed or planned projects include capacity increasing or operational projects on SR-12 necessary to achieve the concept LOS by 2030. The current UTC anticipates conversion of the entire route segment to expressway standards.

The current LOS of E is consistent with conditions found on adjacent segments assessed in D-10. SACOG does not report any explicit capacity increasing projects on the segment, though does include a planning effort that identifies a potential need for unspecified operational improvements in its Regional Transportation Plan (past proposed operational improvements, the installation of passing lanes, were assessed under 2030 conditions and found unlikely to attain corridor concept LOS. Similar deficiencies are noted in the rural segment in eastern Solano County (see Corridor Evaluation). Together, the segment analyses indicated a potential interregional need for corridor improvements beyond currently programmed operation and safety improvements.

Land uses along SR-12 are predominantly agricultural with the area soils designed prime farmland. The Sacramento County 2030 General Plan's land use element proposes to have this area remain as agricultural farmland over the next 20 years. Furthermore, agricultural parcels have Williamson Act contracts, which will protect farmland along the segment.

Characteristic of rural areas' lower population densities, the multimodal opportunities affiliated with SR-12 are limited. South County Transit's Delta Breeze route (Galt-Lodi-Isleton) employs SR-160 and SR-12 on Brannan Island, but provides no stops on SR-12. The same applies to transit connections between Rio Vista and Isleton. Future upgrades to the existing Class III bicycle facility on SR-12 to Class II are contemplated in the Sacramento County Bicycle Master Plan.

SR-12 present unique system planning issues:

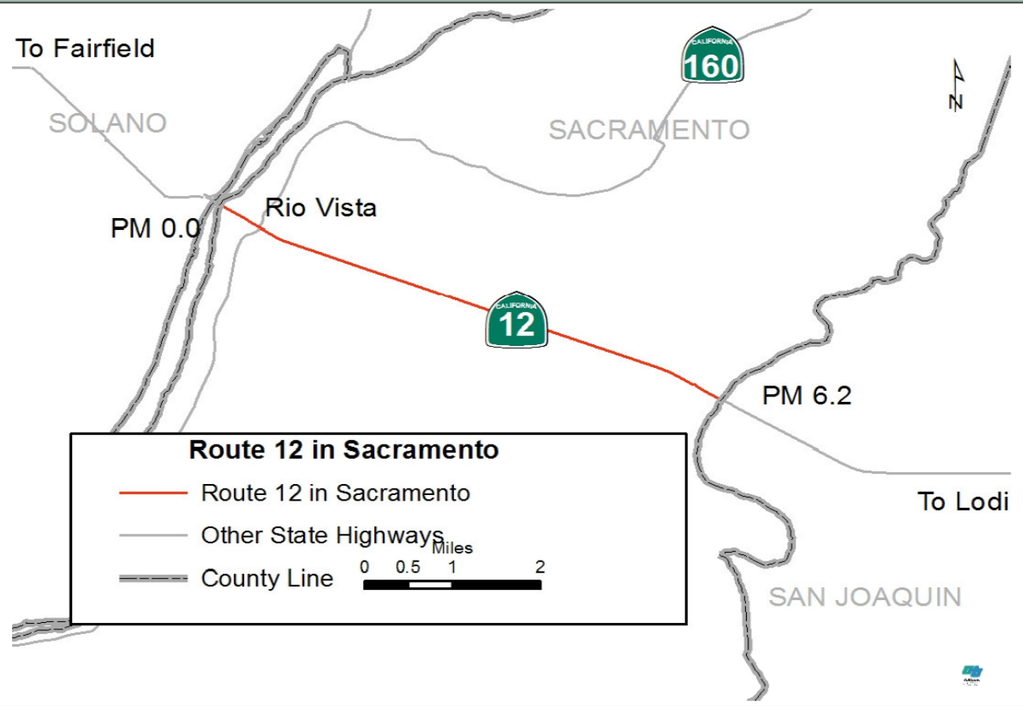
1. The route has been subject to a California Highway Patrol Safety Corridor Safety Project since 1995. The designation reflects ongoing concerns with driver safety due to an accident rate exceeding the State average for both injuries and fatalities on similar highway segments, which prompted passage of Assembly Concurrent Resolution 45 mandating a study of SR-12 in Solano County and to provide recommendations on both short and long range improvements (June 17, 1994). Since that time, corridor studies have had to consider both safety and operational improvements. For the most recent three year period the segment between the Rio Vista Bridge and the San Joaquin County line has reported an accident rate below the State average for similar facilities.

2. SR-12 crosses two drawbridges (Sacramento River at Rio Vista and Mokelumne River). The drawbridges present operational considerations with speed reduction on approach due to reduced lane width, along with intermittent congestion and driver delay associated with bridge openings or when the bridges need to undergo unscheduled maintenance or repair. Non standard shoulders and lane widths combined with a lack of parallel streets and roads for detour contribute to severe congestion events.

3. The high content of peat in Delta soils present engineering challenges with pavement maintenance and lifespan. Oxidation and compaction of peat results in shorter pavement life with frequent upkeep.

4. Future planning efforts should anticipate concerns with inundation due to sea level rise, land subsidence, and changes in precipitation and flood regimes due to global warming. Mapping shows SR-12 to be currently below sea level, with a currently projected additional rise by 2100 to be between 31 and 69 inches, with an estimate of 5 to 8 inches by 2030 (State of California Sea Level Rise Interim Guidance Document, October, 2010)[1]. Subsidence rates in the Delta are anticipated to slow except in locations with ten feet or greater of peat, a condition which applies to portions of Brannan Island[2]. Recent studies suggest that global warming has increased flood risk[3].

STATE ROUTE 12	TRANSPORTATION CONCEPT REPORT	SACRAMENTO COUNTY	SEGMENT 1



Segment Description:

Location:	Brannan Island (Rio Vista to Mokelumne Brs)		
Post Mile:	0.0/6.2	**Rural/Urban/Urbanized:**	Rural
Length:	6.20	**Within City Limits:**	No
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Sacramento County

Roadbed Information

Number of Lanes:	2	**Bridge Name:**	Rio Vista; Mokelumne River
Terrain:	Level	**Lane Width:**	12
Grade %	n/a	**Right of Way Width:**	100-120
Accessible to Bicycles:	Yes	**Shoulder Width:**	1-8
Bridge Needs		**Median Width:**	n/a
Postmile	0.0 &6.2	**Distressed Lane Miles**	n/a
Bridge#	23 0024; 20 0043	**Present Serviceability Rating**	n/a

Route Designations

Functional Classification:	Principal Arterial	**Scenic Highway (Designated):**	No
Facility Type:	2-C; 2-E	**Scenic Highway (Eligible)**	No
Interregional Road System:	Yes	**Trucking Network:**	
High Emphasis Route:	No	**National Network, Terminal Access**	TA
Focus Route/Gateway Route:	No	**Surface Transportation Assistance Act (STAA)**	Yes
National Highway System	Yes	**California Legal:**	Yes
Freeway Expressway System	Yes	**Advisory**	No
Strategic Highway Network	No	**Additional Restrictions**	No
Freeway Agreement:		**Access to Intermodal Freight Facility**	No

Environmental Status

Resource	Level of Impact	Resource	Level of Impact
Flood Plains:	High	**Cultural Resources:**	Moderate
Wetlands:	High	**Leaking Underground Tanks:**	Moderate
Special Status Species:	High	**Possible Hazardous Waste:**	Moderate

Air Quality:

Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Non-Attainment	Non-Attainment	Non-Attainment	Non-Attainment

Travel Forecast Data

Base Free Flow Speed: 60 MPH Existing Facility: 2-Lane Conventional Highway	2010		2020		2030	
	HCS	**LOSPLAN**	**HCS**	**LOSPLAN**	**HCS**	**LOSPLAN**
Level of Service:	E		E		E	
Volume/Capacity:	0.53		0.73		0.95	
Peak Hour Volume:	1263		1664		2034	
Average Daily Traffic:	15,600		16,640		18,190	
Peak Hour Directional Split:	1.0		1.0		1.0	
Truck Volume % of Total ADT:	0.1		0.1		0.1	
Peak Hour % of Trucks:	0.1		0.1		0.1	

Level of Service (LOS) calculated using Highway Capacity Software (Version 6.0, Two Lane Highway).
Analysis performed 12/23/2011.
All LOS reflects vehicles or bicycle. HCS Two Lane does not permit multi modal.

Existing Transportation Network

Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	0.0/6.2	PM		PM		PM	
Location	Route	Location		Location		Location	
Class	III						
LOS	E						

Pedestrian Facility		Park and Rides		Freight Distribution		Transit Bus	
Yes/No	No	Yes/No	No	Yes/No	No	Yes/No	Yes
PM		PM		PM		PM	0.52/6.2
Location		Location		Location		Location	Isleton
LOS							

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident	Rate	Statewide Average	Rate
Fatal & Injury	0.29	**Fatal & Injury**	0.33
Total	0.51	**Total**	0.77

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from **to**

Segment Route Concept

Concept Level of Service:		D
Concept Facility	**2030**	4-C, 4-E
Ultimate Transportation Corridor:		4-E
Comments:		

Planned Projects:

	Post Mile	Location	Description
⑩			
⑨			
⑧			
⑦			
⑥			
⑤			
④			
③			
②			
①			

Intelligent Transportation System (ITS) Elements & Detection

Postmile	ITS Element	Status	Direction
n/a	n/a		n/a

Programmed Projects:

	Post Mile	Location	Description
❺			
❹			
❸			
❷	0.3/6.1	Rio Vista Bridge to Mokelumne Bridge	Install rumble strips
❶	0.3/6.1	Rio Vista Bridge to Mokelumne Bridge	Pavement Rehabilitation

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

Comments: